SCIENCE: ENGINEERING

Award: Associate of Science Degree
Major: Science
Specialization: Engineering
Additional Program Information: https://www.brcc.edu/academics/programs/science/

The A.S. degree program in Science with a specialization in Engineering is designed to prepare students to transfer to four year institutions to pursue a Bachelor of Sciences degree in an area of Engineering. The suggested curriculum and list of courses that follows includes the highest level college-transfer courses available at BRCC and is designed to allow students to transfer to their final institution with the highest standing possible in their intended major. The degree sequencing shown below assumes an initial placement for MTH 263 (Calculus I). Students who do not have credit for MTH 161/MTH 162 or MTH 167 should work with an advisor to determine the prerequisite coursework needed given their mathematics background.

Considering the number of institutions and majors that can be chosen, it is not feasible to offer a curriculum that satisfies the needs of all. For choices of electives, it is strongly recommended that all students begin with the following guidelines, but that they also contact the institution(s) to which they wish to transfer and verify which courses will be best for their specific major and specialization.

Required Courses

Curriculum

First Semester		**Credit Hours**
CHM 111	General Chemistry I	4
EGR 121	Foundations of Engineering	2
ENG 111	College Composition I	3
MTH 263	Calculus I	4
SDV (https://catalog.brcc.edu/programs-study/sdv/)	Student Development	1
History Elective (https://catalog.brcc.edu/programs-study/general-education-as/#history-social)		3
	Credit Hours	**17**
Second Semester		
EGR 122	Engineering Design	3
ENG 112	College Composition II	3
MTH 264	Calculus II	4
Engineering/Technical Electives (p. 2) [1]		3-4
Social and Behavioral Science Elective (https://catalog.brcc.edu/programs-study/general-education-as/#history-social)		3
	Credit Hours	**16-17**
Third Semester		
MTH 265	Calculus III	4
PHY 241	University Physics I	4
Engineering/Technical Electives (p. 2) [1]		3-4
Literature/Humanities/Arts Elective (https://catalog.brcc.edu/programs-study/general-education-as/#literature) [2]		6
	Credit Hours	**17-18**
Fourth Semester		
MTH 266	Linear Algebra	3
MTH 267	Differential Equations	3
PHY 242	University Physics II	4
Engineering/Technical Electives (p. 2) [1]		3-4
Engineering/Technical Electives (p. 2) [1]		3-4
	Credit Hours	**16-18**
	Total Credit Hours	**66-70**

[1] Students should consult the guidelines of their intended four-year institution to determine which elective choices are most appropriate. Advising guides for selected institutions are available on the Academic Advising website.

[2] Each of the two courses must be from different categories.

Approved Electives

Code	Title	Credit Hours
CHM 112	General Chemistry II	4
CSC 205	Computer Organization	3
CSC 215	Computer Systems	3
CSC 221	Introduction to Problem Solving and Programming	3
CSC 222	Object-Oriented Programming	4
CSC 223	Data Structures and Analysis of Algorithms	4
EGR 125	Introduction to Computer Programming for Engineers	4
EGR 206	Engineering Economics	3
EGR 240	Statics	3
EGR 245	Engineering Mechanics - Dynamics	3
EGR 246	Mechanics of Materials	3
EGR 248	Thermodynamics for Engineering	3
EGR 270	Fundamentals of Computer Engineering	4
EGR 271	Electric Circuits I	4
EGR 272	Electric Circuits II	4
GOL 105	Physical Geology	4
MTH 288	Discrete Mathematics	3